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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,691	06/23/2003	Sidharth Jaggi	MCS-021-03 (302967.01)	7627
7590	10/03/2007		EXAMINER	
Mark A. Watson Lyon & Harr Suite 800 300 Esplanade Drive Oxnard, CA 93030			BRUCKART, BENJAMIN R	
			ART UNIT	PAPER NUMBER
			2155	
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			10/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/601,691	JAGGI ET AL.	
	Examiner	Art Unit	
	Benjamin R. Bruckart	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-6, 10-15 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-9 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Claims 1-22 are pending in this Office Action.

Claims 7-9 and 16-18 are elected by restriction requirement.

Claims 1-6, 10-15, 19-22 remain withdrawn.

Claims 7 and 16 are amended.

The 35 U.S.C. 101 rejection is withdrawn in like of applicant's amendment.

Response to Arguments

Applicant's arguments filed in the amendment filed 8/24/07 have been fully considered but they are not persuasive. The reasons are set forth below.

Applicant's invention as claimed:

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claim languages cite... computing the linear combination coefficients between sender and receiver are "full rank." The examiner cannot find the terms "full rank" in the specification and is unsure of the meaning associated with the term. What makes them full?

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim languages cite... computing the linear combination coefficients between sender and receiver are "full rank." The examiner cannot find the terms "full rank" in the specification and is unsure of the meaning associated with the term. What makes them full?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 9, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 18 recites the limitation "full rank" in the last limitation of each of the claims. The examiner cannot find the terms "full rank" in the specification and is unsure of the meaning associated with the term. What makes them full? There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7-9 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by “Network Information Flow”, IEEE Transactions on Information Theory by R. Ahlswede et al (Applicant’s IDS) (herein after “Ahlswede”).

Regarding claim 7, a system for computing a network code (Ahlswede: page 1204-5; Fig. 1), comprising:

computing linear combination coefficients for each of at least one interior network node of a network, said nodes including a sender (Ahlswede: page 1206; capacities, r values or costs; Fig. 5);

computing representation vectors for symbols exiting each interior network node from representation vectors for symbols entering each node and the linear combination coefficients (Ahlswede: page 1204, 1205; R are the vectors and h is the information rates from nodes (page 1204 first para); symbols are just the data); and

computing decoding matrices for each of at least one receiver of the network from the representation vectors for the symbols entering each receiver (Ahlswede: page 1206; decoder reconstruction of X ; Fig. 1 decoders); and

constructing a network code from the combination coefficients, the presentation vectors and the decoding matrices (Ahlswede: page 1204, col. 2).

Regarding claim 8, the system of claim 7 further comprising setting encoding vectors for each interior node, including the sender, to the linear combination coefficients (Ahlswede: Fig. 1; page 1214; multicast to all).

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Regarding claim 9, the system of claim 7 wherein computing the linear combination coefficients further includes ensuring that the representation vectors for the symbols transmitted across edges on a cut between the sender and each receiver are full rank (Ahlsweide: page 1205; F for flow across all nodes).

Claims 16-18 are substantially similar in scope and claim limitations and are rejected for the same reasons as set forth above.

Remarks

The applicant has made amendments to the claim limitations to overcome 101 rejections.

The Applicant Argues:

The applicant argues the term “full rank” is well known in the art.

In response, the examiner respectfully submits:

The examiner requires evidence that it was well known in the art. The examiner suggests an information disclosure statement prior to the filing of the application that defines full rank to include the definitions given by applicant in the arguments or an affidavit that confirms applicant's definition. As it is, the specification mentions rank but not full rank and it remains unclear.

Applicant argues the Ahlswede reference does not teach "representation vectors"

In response, the examiner respectfully submits

The Ahlswede reference reads on the claim limitations. Applicant's broad claim language allows such an interpretation. Applicant cites the specification for support in defining a representational vector. Ahlswede teaches representational vectors as interpreted that are computed based on input and information flow. Applicant has not distinguished its claims from the cited prior art.

It is noted that the features upon which applicant relies are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant is encouraged to include the specification limitations into the claim limitations especially the formula equations for distinction and advancing prosecution.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R Bruckart whose telephone number 571-272-3982.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the examiner whose telephone number is 571-272-3982.

Benjamin R Bruckart
Examiner
Art Unit 2155

BAJ


SALEH NAJJAR
SUPERVISORY PATENT EXAMINER